

Maintenance Charges and Costs for Residents Of State Institutions for the Mentally Retarded

EDWARD EAGLE, Ph.D.

ALTHOUGH the problem of mental retardation affects 3 percent of all children, it has elicited little interest or concern by the appropriate officials or the general public in many States. Of the 30 potential mentally retarded children among each 1,000 children born, 1 will require full-time care for life (1).

While it is difficult to determine accurately the economic impact of this major calamity, the mere presence of more than 5 million mentally retarded individuals in our general population and the birth of more than 125,000 new ones each year present a burden of hundreds of millions of dollars that must be borne by the families, the communities, and government at all levels.

In 1960 the author published the results obtained from questionnaires sent to responsible officials in all States regarding charges, costs of care, reimbursement, and other items concerning the mentally retarded and the mentally ill in public institutions and hospitals (1). Between July and September 1961, in preparation for a governor's conference on the Illinois Patient Pay Plan involving reimbursement by patients and liable relatives for care in State hospitals and institutions, I sent another series of questionnaires to all 50 States seeking additional information. The facts regarding the mentally ill have been reported (2). The data presented here for the mentally retarded are from these and other sources (3-6) and include information for fiscal 1962. The present study

involves States only, and statistics for the District of Columbia and Puerto Rico have been omitted.

In this paper I shall use the term "mental retardation," as I have stated elsewhere (?), to also include mental deficiency and mental subnormality. Mental retardation can then be defined as a nonreversible, subnormal mental development which existed prior to adolescence in practically all cases. It may result from many different prenatal genetic, environmental, and infectious causes; may begin to develop at the time of birth from prematurity, jaundice, asphyxia, or mechanical injury; or may be caused by postnatal infection or degenerative changes in the brain. It cannot be over-emphasized that mental retardation is not a disease but a symptom of brain involvement of multifaceted etiology. The number of known causes of this condition exceeds 200 if one includes the individual biochemical, microbiological, and pharmacological factors that have been implicated. As investigations continue, particularly in biochemistry, genetics, pharmacology, and pathology, many additional causes of mental retardation will be uncovered.

Number of Institutions and Costs

Public institutions for the mentally retarded. Until recently Alaska had no facilities for the mentally retarded or the mentally ill and cared for them by contract with a hospital in Oregon. Nevada has no institution for the mentally retarded, but those who are noneducable or can qualify under a broad definition of mental illness can be admitted to the State hospital for the mentally ill. In fiscal 1962 there were a

Dr. Eagle, a physiologist and toxicologist, is a director and chairman of the research committee of the Illinois Council for Mentally Retarded Children, Chicago.

total of 123 State institutions for the mentally retarded in the remaining 48 States, distributed as follows: 11 in New York; 9 in Michigan; 7 in Pennsylvania; 6 each in California, Minnesota, and Texas; 5 each in Massachusetts, New Jersey, and Ohio; 4 in Washington; 3 each in Florida, Illinois, Indiana, Kansas, North Carolina, and Wisconsin; 2 each in Colorado, Connecticut, Iowa, Louisiana, Missouri, Oklahoma, South Carolina, Tennessee, and Virginia; and 1 in each of the remaining 23 States.

In most States the fiscal year ends on June 30. The exceptions are March 31 for New York, May 31 for Pennsylvania, August 31 for Texas, September 30 for Alabama, and December 31 for Utah, West Virginia, and Wyoming.

Patient movement and administrative data for 11 successive fiscal years are summarized in table 1. Statistics for Alaska and Hawaii are not included until fiscal 1960. The number of State institutions for the mentally retarded increased from 95 to 123, an increase of 29.5 percent within the 10-year period. The greatest gain in number of institutions occurred in 1962 when four institutions were added in New York, two each in Florida and Ohio, and one each in Illinois, Indiana, and Texas. There was a downward trend for percent total admissions,

for percent total discharges from the books of the institutions, and for percent net live releases, and an increase in percent of new residents who remained in the institutions. The patient-to-personnel ratios improved from 4.5 patients per full-time employee in 1952 to 2.7 patients per full-time employee in 1962. The average daily resident patient population increased from 131,512 in 1952 to 173,758 in 1962, an increase of 32.1 percent for the 10-year interval.

Maintenance cost per resident (per capita cost). The cost for maintenance of residents in public institutions for the mentally retarded has been increasing steadily for many years. Average costs per resident retardate per month for all States were \$24 in 1940, \$32 in 1945, and \$62 in 1950. From 1952 to 1962 these costs increased from \$76 to \$155, an increase of 104.0 percent (table 1). The maintenance costs per resident for individual States for fiscal 1962 and 1961 are listed in table 2. These values represent such maintenance expenditures as salaries and wages, purchased provisions, fuel, light, water, and other items and have been rounded off to the nearest dollar. In fiscal 1961 Alaska had the highest monthly per resident maintenance expenditure (\$270), Kansas the second highest (\$252), and Mississippi had the lowest (\$50);

Table 1. Costs per resident, percent total admissions, direct discharges, total discharges, net live releases, deaths, and new residents, and patient-to-personnel ratios in State institutions for the mentally retarded, fiscal years 1952-62

| Fiscal year | Number of institutions | Average maintenance cost per month | | Percent total admissions ¹ | Discharges | | | Percent deaths in institutions ¹ | Percent new residents in institutions ² | Patient-to-personnel ratio |
|-------------------|------------------------|------------------------------------|-----------------------------|---------------------------------------|--|--|--|---|--|----------------------------|
| | | Per resident patient | Per patient under treatment | | Percent direct discharges ¹ | Percent total discharges from books ¹ | Percent net live releases ¹ | | | |
| 1952 | 95 | \$76 | | 9.3 | 1.1 | 4.9 | 5.2 | 2.1 | 5.3 | 4.5 |
| 1953 | 96 | 81 | | 9.4 | 1.2 | 4.6 | 4.9 | 2.1 | 5.7 | 4.3 |
| 1954 | 96 | 86 | | 9.8 | 1.2 | 4.2 | 4.4 | 2.0 | 6.5 | 4.2 |
| 1955 | 98 | 91 | | 9.2 | 1.2 | 3.9 | 4.0 | 1.9 | 6.4 | 3.9 |
| 1956 | 99 | 97 | \$90 | 8.9 | 1.1 | 3.5 | 5.3 | 1.9 | 4.7 | 3.7 |
| 1957 | 98 | 107 | 100 | 9.4 | 1.1 | 3.8 | 3.9 | 1.9 | 6.5 | 3.5 |
| 1958 | 101 | 117 | 110 | 8.7 | 1.0 | 3.5 | 4.1 | 2.3 | 5.6 | 3.3 |
| 1959 | 105 | 125 | 118 | 8.8 | 1.0 | 3.5 | 4.1 | 2.0 | 5.7 | 3.2 |
| 1960 ³ | 107 | 137 | 130 | 9.0 | 1.0 | 3.8 | 4.0 | 2.0 | 6.1 | 3.0 |
| 1961 ³ | 112 | 143 | 136 | 8.7 | | | 4.8 | 1.9 | | 2.9 |
| 1962 ³ | 123 | 155 | 147 | 8.1 | | | 4.4 | 1.9 | | 2.7 |

¹ Expressed as percent of average daily resident patient population.

² Percent of number of residents at end of year.

³ Includes data on Alaska and Hawaii.

the median for all States was \$139. In fiscal 1962 the monthly maintenance costs per resident varied from a high of \$287 in Kansas to a low of \$55 in Mississippi; the median for all States was \$150.

Of the various ways of depicting the wealth of a State, discussed elsewhere (2), the annual general revenue, representing State income from taxes, from the Federal Government, from local governments, and from charges and miscellaneous general revenue, is the most practical. The States with the highest expenditures per resident in the institutions for the mentally retarded were not necessarily those States with the highest income. Some outstanding examples of high expenditures per resident for the institutionalized mentally retarded in fiscal 1961 (6) by States which ranked low in general revenue in that same year (8) can be noted in table 2. Alaska had the highest expenditure per institutionalized retardate and the lowest general revenue of all 50 States (table 2), and Kansas, with the second highest maintenance expenditure per resident, ranked 29th in amount of State general revenue. Other States noteworthy in this connection are Wisconsin, Connecticut, Arkansas, Hawaii, Maryland, Delaware, Wyoming, Idaho, and New Hampshire.

Conversely, some of the wealthiest States on the basis of their general revenue in 1961 ranked low in the order of per capita expenditures for the maintenance of the mentally retarded (table 2.) New York, second wealthiest, was 23d in per resident maintenance expenditure. Pennsylvania, 3d in general revenue, ranked 24th. Texas, 5th in wealth, was 37th on the list of States for expenditure per resident, and Illinois, 6th wealthiest, was 42d. These comparative rankings for Ohio, Indiana, Minnesota, Virginia, Oklahoma, and others were also unusually divergent.

Percent of State revenue expended for maintenance. Table 2 lists the percent of each State's general revenue expended for maintenance of its institutionalized retardates in fiscal 1961. Massachusetts was at the top with 2.17 percent and Arkansas was on the bottom with 0.17 percent of general revenue used to maintain the institutionalized mentally retarded. The median value was 0.9 percent for all the

States. The rank of each State for percent of general revenue expended is also shown in table 2.

Payment

County payments. In 14 States the county of residence is required to make payments to the State for the care of the mentally retarded in State institutions. In Arizona the county pays the difference between the average per capita cost and a court-established amount that the particular parents must pay. In California the county pays \$20 per month for each mentally retarded resident in the State institutions. In Iowa the counties are liable for the full cost of care of the mentally retarded under 21 years and over 51 years, for 25 percent of the per resident maintenance cost for those between the ages of 21 and 30, and for 50 percent of the cost for those between 31 and 50 years. In Maryland the counties pay that amount sufficient to bring each resident's minimum reimbursement up to \$10.43 per month.

In Michigan the counties are liable for the full cost of the first year of residence, regardless of the financial ability of the patient or his liable relatives. The county pays \$10 per month per resident in Minnesota and Missouri, the full cost of care in Nebraska, 50 percent of the average per capita cost in New Jersey, \$20 per month in South Dakota, and \$16.60 per month in Tennessee. In West Virginia, in instances of non-payment by those liable, the county must pay \$12.50 per month for such residents, and in New Mexico the county pays \$10 per month for the indigent mentally retarded.

Maximum legal charges. In fiscal 1960, five States, Georgia, Louisiana, Mississippi, South Dakota, and Washington, did not require payment for the care of the institutionalized mentally retarded. A frequently quoted statement from a report of an organization of State officials directly involved with reimbursement (9) to the effect that four other States, Arizona, North Carolina, Oklahoma, and Tennessee, do not require payment of any parent has been denied in communications from the four States concerned.

At least six States have made changes in their policies on maximum legal charges. Since the beginning of 1961, Georgia, which formerly did

Table 2. Costs per resident, percent of State revenue expended, reimbursement, and resident population in State institutions for the mentally retarded, by State, fiscal years 1959, 1961, and 1962

| State | Maintenance cost per month per resident | | State general revenue (millions) | Percent of State general revenue expended for maintaining institutions | Percent of maintenance cost reimbursed from private sources | Reimbursement per month per resident | Average daily resident patient population |
|---------------------|---|-----------|----------------------------------|--|---|--------------------------------------|---|
| | 1962 | 1961 | 1961 | 1961 | 1959 | 1959 | 1962 |
| Alabama | \$96 | \$85 (43) | \$483 (23) | 0.38 (40) | 3.2 | \$2.34 | 1,872 |
| Alaska ¹ | NA | 270 (1) | 70 (50) | .40 (38) | 3.8 | 8.49 | (¹) |
| Arizona | 107 | 100 (39) | 277 (33) | .26 (45) | 18.2 | 16.72 | 680 |
| Arkansas | 192 | 169 (10) | 272 (34) | .17 (50) | NA | NA | 258 |
| California | 243 | 220 (3) | 3,341 (1) | .90 (25) | NA | NA | 11,706 |
| Colorado | 186 | 154 (16) | 361 (28) | .83 (28) | 8.0 | 11.42 | 1,640 |
| Connecticut | 196 | 182 (8) | 378 (26) | 2.08 (2) | ² 8.2 | ² 13.59 | 3,611 |
| Delaware | 158 | 156 (14) | 108 (45) | .98 (20) | 7.3 | 11.32 | 572 |
| Florida | 195 | 189 (5) | 742 (10) | .50 (37) | 1.2 | 2.18 | 3,242 |
| Georgia | 149 | 132 (30) | 591 (17) | .38 (39) | 0 | 0 | 1,570 |
| Hawaii | 196 | 165 (11) | 209 (36) | .79 (29) | .7 | 1.00 | 829 |
| Idaho | 202 | 142 (21) | 116 (44) | 1.12 (15) | 10.1 | 9.77 | 748 |
| Illinois | 112 | 98 (42) | 1,296 (6) | .91 (24) | 8.3 | 7.07 | 10,088 |
| Indiana | 142 | 127 (32) | 650 (13) | .88 (26) | 4.3 | 5.58 | 4,033 |
| Iowa | 143 | 119 (34) | 435 (25) | 1.08 (17) | NA | NA | 2,844 |
| Kansas | 287 | 252 (2) | 345 (29) | 1.85 (4) | 8.8 | 15.41 | 2,085 |
| Kentucky | 76 | 69 (47) | 451 (24) | .20 (46) | 2.2 | 1.63 | 1,196 |
| Louisiana | 159 | 148 (19) | 781 (9) | .37 (42) | 0 | 0 | 1,693 |
| Maine | 185 | 155 (15) | 150 (39) | 1.66 (5) | 6.3 | 7.39 | 1,263 |
| Maryland | 172 | 163 (12) | 488 (21) | .94 (23) | ² 4.1 | ² 5.69 | 2,460 |
| Massachusetts | 163 | 159 (13) | 781 (8) | 2.17 (1) | 4.6 | 6.51 | 9,107 |
| Michigan | 189 | 185 (7) | 1,397 (4) | 1.89 (3) | ² 2.7 | ² 4.56 | 11,991 |
| Minnesota | 136 | 125 (33) | 621 (16) | 1.42 (8) | ² .9 | ² 2.29 | 6,083 |
| Mississippi | 55 | 50 (50) | 333 (31) | .20 (48) | 2.3 | 2.24 | 1,148 |
| Missouri | 134 | 136 (28) | 540 (18) | .76 (31) | 9.4 | 9.87 | 2,494 |
| Montana | 86 | 82 (44) | 132 (42) | .65 (36) | 11.4 | 11.11 | 866 |
| Nebraska | 82 | 82 (45) | 193 (37) | 1.10 (16) | NA | NA | 2,221 |
| Nevada ¹ | 150 | 138 (26) | 76 (49) | .30 (44) | (¹) | (¹) | (¹) |
| New Hampshire | 160 | 141 (22) | 86 (47) | 1.64 (6) | 4.2 | 5.03 | 833 |
| New Jersey | 148 | 136 (27) | 626 (14) | 1.49 (7) | ² 1.5 | ² 1.58 | 5,639 |
| New Mexico | 195 | 153 (17) | 244 (35) | .19 (49) | 8.3 | 11.61 | 225 |
| New York | 150 | 141 (23) | 2,720 (2) | 1.42 (9) | 5.7 | 7.32 | 23,323 |
| North Carolina | 140 | 142 (20) | 681 (11) | .86 (27) | 10.1 | 10.29 | 3,839 |
| North Dakota | 110 | 99 (41) | 140 (40) | 1.15 (14) | 1.3 | 1.06 | 1,341 |
| Ohio | 142 | 134 (29) | 1,284 (7) | .98 (21) | 8.0 | 8.51 | 9,739 |
| Oklahoma | 75 | 61 (49) | 485 (22) | .31 (43) | ² 10.2 | ² 6.44 | 2,107 |
| Oregon | 141 | 130 (31) | 344 (30) | 1.17 (13) | 9.0 | 10.16 | 2,685 |
| Pennsylvania | 167 | 141 (24) | 1,608 (3) | 1.04 (19) | 8.5 | 10.24 | 10,301 |
| Rhode Island | 175 | 170 (9) | 137 (41) | 1.36 (10) | 2.2 | 3.35 | 948 |
| South Carolina | 85 | 81 (46) | 364 (27) | .72 (32) | ² 3.5 | ² 2.46 | 2,689 |
| South Dakota | 72 | 66 (48) | 129 (43) | .67 (35) | 0 | 0 | 1,115 |
| Tennessee | 106 | 104 (38) | 492 (20) | .37 (41) | ² 2.0 | ² 1.53 | 1,640 |
| Texas | 115 | 104 (37) | 1,297 (5) | .69 (33) | 8.3 | 7.72 | 7,859 |
| Utah | 108 | 100 (40) | 174 (38) | .68 (34) | NA | NA | 936 |
| Vermont | 121 | 113 (36) | 83 (48) | .97 (22) | 2.8 | 2.98 | 615 |
| Virginia | 124 | 113 (35) | 522 (19) | .76 (30) | 9.9 | 9.85 | 3,077 |
| Washington | 190 | 189 (6) | 658 (12) | 1.30 (12) | 0 | 0 | 3,886 |
| West Virginia | 163 | 140 (25) | 280 (32) | .21 (47) | 1.9 | 1.84 | 349 |
| Wisconsin | 211 | 194 (4) | 623 (15) | 1.36 (11) | 7.4 | 11.46 | 3,707 |
| Wyoming | 160 | 149 (18) | 101 (46) | 1.07 (18) | 3.4 | 4.24 | 605 |

¹ No institution in Alaska or Nevada; some calculations based on number of mentally retarded cared for in the facilities provided for them.

² 1958 data.

NOTE: Numbers in parentheses indicate State's rank in general revenue, in expenditure per resident patient, and in percent of general revenue expended for maintaining institutions for fiscal 1961. NA means information not available.

not charge for the care of the mentally retarded, has used the per resident cost as a ceiling, except that a patient with dependents need not pay more than 10 percent of his gross income, and liable relatives cannot be charged more than 10 percent of their net income.

A Connecticut law, effective July 1, 1961, provides that maximum liability for responsible relatives be fixed at the 1959 per resident cost (\$117 per month); the maximum charge to patients is the per resident cost, which was \$138.36 in 1962. On July 1, 1961, Minnesota reduced the maximum charge to liable relatives to \$10 per month, with a cutoff at age 21. After January 1, 1962, a new Ohio law fixed the maximum fee charged patients at the average per capita cost for all institutions for the mentally retarded; the maximum to be paid by liable relatives is a varying percentage of the per capita cost according to income; after liable relatives have paid support fees for 15 years, the charges are further reduced by one-half. Beginning July 1, 1962, Mississippi, which formerly collected solely on the basis of voluntary payments, instituted a maximum legal charge of \$54 per month, with no charge after the patient becomes 21.

Illinois recently passed new legislation, effective January 1, 1964, which will lower the maximum charge for liable relatives of the mentally retarded and the mentally ill to \$50 per month, with the use of an equitable schedule of payments of lesser amounts on the basis of financial ability. The liability of responsible relatives will cease after payment on the basis of financial ability has been made for a total of 12 years. The maximum charge to patients or their estates will be the average per capita cost for all institutions for the mentally retarded and hospitals for the mentally ill. This average was \$123 per month in fiscal 1961 and \$132 in fiscal 1962. This Illinois law has such other new provisions as an effective statute of limitations for charges owed by liable relatives for 5 years, and a new board of reimbursement appeals, independent of the Illinois Department of Mental Health, to review decisions related to charges.

Currently, only three States do not require payment for the care of the mentally retarded in their State institutions. Washington allows

no charge and payments are voluntary in Louisiana and South Dakota. However, New Mexico has no formalized program of payments for the care of its institutionalized mentally retarded, and Wyoming reports that, in the absence of an express agreement by liable relatives, only the patient's estate is liable. In fiscal 1962 the States' maximum legal monthly charges varied from a high of \$190 in one institution in Missouri to such low values as \$20 in California, \$10 for liable relatives in Minnesota, and no charge in the three States just mentioned (table 3). The median for liable relatives was \$82, and that for the residents themselves or their estates was \$99.

In 17 States the maximum is based on the maintenance cost per resident patient for the previous fiscal year or some value close to it. For the remaining 30 States the maximum fee is a fixed one which is considerably less than the per patient cost; in some very much less. States with marked differences between the maximum legal monthly charge and the monthly maintenance cost per resident are Washington—no charge allowed, maintenance cost per resident \$190; Minnesota—\$10 maximum charge to liable relatives, cost \$136; California—\$20 and \$243; Hawaii \$40 and \$196; and Kansas—\$52 maximum for liable relatives, cost \$287. (See tables 2 and 3 for significant differences for other States.)

Certain States make a distinction between the maximum payment required from liable relatives and that which the patient himself or his estate must pay (Connecticut, Georgia, Kansas, Maryland, Ohio, and Minnesota). Illinois can also be included after January 1, 1964. At present, nine States have the same maximum legal charges for both the long-term mentally retarded residents and the comparatively short-term mentally ill patients. These States are Alabama, Alaska, Colorado, Connecticut, Illinois, Kansas, Maine, Maryland, and Tennessee.

Only 10 States have not raised their maximum legal monthly charges at least once since 1957: Washington, Louisiana, and South Dakota, which require no payment, and California, Illinois, Kansas, Kentucky, Maine, West Virginia, and Wisconsin. In only 2 of these 10 States (Illinois and Washington) are parents required to pay for clothing.

Table 3. Maximum legal monthly charge, percent paid for at maximum care in State institutions for the mentally

| State | Maximum legal monthly charge | Percent being paid for at maximum rate | Charge to family with \$500 gross monthly income | Collection under lien or claims law | Remarks |
|--------------------|------------------------------|--|--|-------------------------------------|--|
| Alabama..... | \$75 | NA | NA | No.... | Charge determined by circuit courts. |
| Alaska..... | 180 | 0 | NA | NA.... | No institution; housed in Oregon; \$150 for children. |
| Arizona..... | 98 | 10.6 | (1) | Yes.... | Superior court decides amount to be paid. |
| Arkansas..... | 100 | 1.1 | (1) | Yes.... | No fixed charge for \$500 gross monthly income. |
| California..... | 20 | NA | (1) | Yes.... | County pays \$20; may seek \$20 or less from relatives as determined by court. |
| Colorado..... | 95 | 2.0 | \$30 | NA.... | Pay maximum if net taxable income is more than \$9,000. |
| Connecticut..... | 117 or 138 | ² 5.0 | 62 | Yes.... | \$117 statutory maximum for relatives; their liability ceases when patient is 21 or after payments are made for 16 years, whichever is later. |
| Delaware..... | 120 | .5 | 50-75 | Yes.... | Maximum charge in the medical center is \$210. |
| Florida..... | 75 | .9 | NA | NA.... | Court decides amount to be paid. |
| Georgia..... | 142 | NA | 30 | Yes.... | Liable relatives cannot be charged more than 10 percent of their net income for the previous year. |
| Hawaii..... | 40 | NA | 5-40 | NA.... | Parents pay for minor children only. |
| Idaho..... | 135 | 2.5 | (1) | NA.... | |
| Illinois..... | 81 | 4.8 | 60 | Yes.... | No charge for ages 6-17; see text for new law. |
| Indiana..... | 65 | ² 4.0 | (1) | NA.... | |
| Iowa..... | 97 or 127 | 0 | NA | Yes.... | No charge for those under 21 and over 50; for ages 21-30 up to 75 percent of per capita cost; for ages 31-50 up to 50 percent of cost in institution of residence. |
| Kansas..... | 52 or 121 | NA | (1) | Yes.... | Statutory maximum of \$52 for liable relatives and \$121 for patients or their estates. |
| Kentucky..... | 50 | NA | (1) | No.... | Parents pay for minor children only. |
| Louisiana..... | 0 | 0 | 0 | No.... | No charge; payments strictly voluntary. |
| Maine..... | 60 | NA | 45-52 | Yes.... | |
| Maryland..... | 152 | .9 | (1) | Yes.... | Liable relatives pay 25 percent of the per capita cost after patient is institutionalized for 30 months. |
| Massachusetts..... | 135 | ² 2.0 | (1) | Yes.... | Individual case basis for charge determination. |
| Michigan..... | 170 | NA | (1) | Yes.... | 92 probate judges decide amount of charge. |
| Minnesota..... | 10 or 119 | NA | (1) | Yes.... | \$10 maximum for relatives earning \$4,000 or more; no charge after age 21; patient pays per capita cost. |

See footnote at end of table.

Comparative charges to a family earning \$500 gross monthly income. To make meaningful comparisons between charges in the various States it is obviously necessary to have some common denominator. In the questionnaires sent to all 50 States in 1959 (1) and again in the fall of 1961, one of the questions asked was, "What are the monthly charges for the institutionalized mentally retarded child (no other children in the family) whose parents earn a gross monthly income of \$500?" The responses varied from zero in some States to \$80 (table 3). The median charge to this family unit in 29 States was less than \$35, although some States replied that charges were less than their maximum fees with no indication of how much less.

The States which would charge this family group with \$500 gross monthly income the highest monthly rates are Texas (\$80, or 16 percent of the gross income), Delaware (\$50-\$75, or 10 to 15 percent of the gross income), Connecticut (\$62, or 12.4 percent of the gross monthly income), and Illinois (\$60, or 12 percent of the gross monthly income). They are not necessarily those with the best facilities and services and their relative rankings for maintenance expenditure per mentally retarded resident and for their patient-to-personnel ratios are poor. In fiscal 1962 Texas was 37th from the top for per capita maintenance expenditure and had the 21st best patient-to-personnel ratio; Delaware was 23d and 8th; Connecticut was 6th and 17th;

charge, and charge to family group with \$500 gross monthly income for retarded, by State, fiscal 1962

| State | Maximum legal monthly charge | Percent being paid for at maximum rate | Charge to family with \$500 gross monthly income | Collection under lien or claims law | Remarks |
|---------------------|------------------------------|--|--|-------------------------------------|---|
| Mississippi..... | 54 | 5.0 | (¹) | No..... | No charge to parents after age 21. |
| Missouri..... | 190 or 135 | 0 | (¹) | Yes..... | Maximum is per capita cost in specific institution. |
| Montana..... | 80 | 2.8 | (¹) | Yes..... | Functions through State board of education. |
| Nebraska..... | 84 | 10.0 | (¹) | Yes..... | County decides amount to be paid. |
| Nevada..... | 75 | 0 | 0 | Yes..... | Cared for in State hospital for mentally ill. |
| New Hampshire..... | 143 | 1.5 | (¹) | Yes..... | Charges determined on individual case basis. |
| New Jersey..... | 141 | 1.4 | (¹) | Yes..... | 21 autonomous county adjusters determine charges. |
| New Mexico..... | 60 | 0 | 5-30 | NA..... | No formalized program of payments. |
| New York..... | 165 | 1.0 | 30-40 | Yes..... | |
| North Carolina..... | 60 | NA | (¹) | Yes..... | Parents do not pay for children admitted after 21. |
| North Dakota..... | 86 | (³) | (¹) | NA..... | |
| Ohio..... | 135 | NA | 40.50 | Yes..... | Maximum is general average per capita cost in all institutions for the mentally retarded. Charge to relatives cut in half after 15 years. |
| Oklahoma..... | 60 | ² 10.0 | (¹) | Yes..... | Charge varies with individual case. |
| Oregon..... | 123 | 0 | (¹) | Yes..... | Court decides charge on individual case basis. |
| Pennsylvania..... | 120-180 | NA | NA | Yes..... | Maximum is cost in institution of residence. |
| Rhode Island..... | 150 | (³) | (¹) | Yes..... | Individual case basis. |
| South Carolina..... | 50 or 60 | (³) | (¹) | Yes..... | Maximum depends on institution of residence. |
| South Dakota..... | 0 | 0 | 0 | No..... | No charge; can pay to \$25 voluntarily. |
| Tennessee..... | 75 | NA | NA | Yes..... | |
| Texas..... | 105 | NA | 80 | Yes..... | Maximum for first month is \$200. |
| Utah..... | 65 | NA | 25 | NA..... | |
| Vermont..... | 120 | NA | (¹) | NA..... | Charge, if any, decided by committing judge. |
| Virginia..... | 111 | 7.6 | NA | Yes..... | Maximum is average per capita cost or \$125, whichever is less. |
| Washington..... | 0 | 0 | 0 | No..... | No charge allowed for care of mentally retarded. |
| West Virginia..... | 30 | NA | 0-30 | Yes..... | Parents pay for minors only. |
| Wisconsin..... | 60 | NA | (¹) | Yes..... | Parents pay for minors only. |
| Wyoming..... | 100 | 0 | (¹) | Yes..... | In the absence of an express agreement, only the patient himself is liable. |

¹ No fixed charge for \$500 gross monthly income, but charge is less than the maximum.

² Approximate values.

³ Very small.

NOTE: NA means information not available.

and Illinois ranked 38th for maintenance expenditure per resident retardate and 45th for patient-to-personnel ratio. Two of these States, Illinois and Delaware, also require payment for clothing.

Those liable for payment. In all States except Louisiana, South Dakota, and Washington, the patient himself or his estate is liable for charges for care in the institutions for the mentally retarded. In 34 States the parents of the mentally retarded are required to pay charges as long as they or the patient may live, and in 13 States the parents are obligated to pay for specific periods of time (table 3).

Either the spouse or husband only can be held liable for charges in 38 States, and children

of retardates are considered liable relatives in 32 States. However, most of the mentally retarded are admitted while very young, 84.1 percent of all first admissions being under 20 years of age. Since the institutionalized mentally retarded are rarely married or have children, the likelihood of support from spouses and children is minimal. For example, in fiscal 1961 in Illinois only 2 spouses and 8 children were making payments as liable relatives of institutionalized retardates out of a total average daily resident population of 10,056. Actually, parents represented 99.3 percent of all liable relatives paying charges of any amount.

Percent paying the maximum charges. The percent of mentally retarded residents being

paid for at the maximum legal charge level either by themselves or by liable relatives, parents in practically all cases, is given for individual States in table 3. For 36 States these values varied from zero in 9 States to a high of 10.6 percent in Arizona, the median being 0.9 percent. This information was not available for 14 States.

Payment for clothing. In 32 States parents of the mentally retarded are not required to pay for or supply clothing, but in 16 others they are required to do so. Since 1 of these 16 States is Washington which does not charge for the care of the mentally retarded, only 15 States levy charges for care and also require that clothing be paid for or supplied. Information pertaining to liability for clothing in Alaska and Hawaii was not available.

Ability To Pay

The term "ability to pay" is subject to many different interpretations by the diverse jurisdictions concerned in the various States. Not only does judgment of ability to pay vary greatly from one State to another, but it is also inconsistent within the State. In Michigan, for example, ability to pay is determined and the amount of the charge is fixed by order of the probate judge making the commitment. Since 92 probate judges make these determinations, there is little compatibility in decisions on ability to pay charges in Michigan. In New Jersey determination of ability to pay is the responsibility of 21 autonomous county adjusters or their duly designated subordinates; and in Arizona ability to pay is determined by the superior court of the county of residence and the basis, as well as the final determination, varies from county to county. Ability to pay is determined by a court of law in 13 States, by the department concerned in 16 States, at the institution level in 15 States, and by the county in 3 States. The remaining three States (Louisiana, South Dakota, and Washington) do not require payment for the mentally retarded.

Twenty States use net income as a criterion for determining ability to pay and seven use gross income or adjusted gross income as a yardstick. Nine States use a chart to determine charges. Connecticut law, on the other hand,

forbids use of a chart. Some applicable comments and policies regarding ability to pay, in addition to those already cited (1), follow.

ALASKA: We take into account what the relatives say it costs them to live. We do not have a policy which says that if a person grosses so much he shall pay so much.

ARIZONA: Basis of determination of ability to pay may vary from county to county. We do not know what a family earning \$500 gross would be charged.

COLORADO: It was not the intent of the legislature nor is it the intent of those charged with administering the new act to impose undue hardship.

CONNECTICUT: Ability to pay is based on net income after taxes. Connecticut uses the cost of living scale based on the "City Workers' Family Budget" published by the U.S. Bureau of Labor Statistics. This provides the best available scientific basis for determining cost of living standards for a self-supporting family.

GEORGIA: Can charge no more than 10 percent of the gross income less all deductions, credit, and personal exemptions.

INDIANA: Indiana does not use a sliding scale which establishes specific charges for varying income levels. We have found that in spite of the apparent logic of this approach, the mere existence of income at a certain level does not mean it is available for this expense to the same degree in every family with that level of income.

MISSISSIPPI: The stated policy in Mississippi is to collect on a system of equity, using moral responsibility and willingness to pay at the time of admission rather than emphasizing legal responsibility. Mississippi uses the criteria for determining the ability to pay developed for southern States, beginning with a cost of living index of \$450 for a family of four.

NEW HAMPSHIRE: Monthly charges on fixed incomes are not applicable because the charge is on an individual case basis, with no set formula based on income.

SOUTH CAROLINA: Ability to pay is not based on gross or net income. It is well known that some individuals earning good salaries must positively spend more than others, depending on conditions.

Reimbursement

Data regarding reimbursement to the States from private sources, that is from patients and their estates and from liable relatives of the mentally retarded, have never been published for all States, and information of this type is difficult to obtain. It has been possible to calculate from data supplied elsewhere (3,9) the amount reimbursed from private sources per average daily resident patient in 36 States for fiscal 1959 and for 8 other States in fiscal 1958 (table 2). Reimbursement data are not given for the remaining 6 States for various reasons.

For California, Iowa, and Nebraska it was not possible to separate the county payments from the private payments; no figures were available for Utah and Arkansas; and Nevada has no institution for the mentally retarded. In the 14 States in which the counties make payments for care of the institutionalized mentally retarded, accurate reimbursement statistics require separation of the county payments from the private payments. For example, in New Jersey a total of \$3,086,577, or 96.6 percent of all reimbursement, was paid by counties and only \$106,836 by private sources in fiscal 1958. In Minnesota \$394,878 was paid by counties and \$145,670 by private sources; in Tennessee \$146,707 was paid by counties and only \$21,947 by private sources (9).

The States which collected the greatest amounts per month per average daily resident in fiscal 1959 were not those which had the highest maximum legal monthly charges at that time (table 2). Ten States which are outstanding examples of those with high rank in amount of private reimbursement per resident per month but low rank in the amount of their maximum legal monthly charge follow.

| State | Rank in reimbursement | Rank in maximum legal charge |
|---------------------|-----------------------|------------------------------|
| Arizona..... | 1 | 13 |
| Kansas..... | 2 | 22 |
| Connecticut..... | 3 | 11 |
| New Mexico..... | 4 | 27 |
| Wisconsin..... | 5 | 31 |
| Colorado..... | 6 | 35 |
| Montana..... | 8 | 16 |
| North Carolina..... | 9 | 28 |
| Virginia..... | 13 | 25 |
| Maine..... | 18 | 26 |

On the other hand, some States with high monthly maximum legal charges had low rank in the amount of private reimbursement per resident per month (table 2), as demonstrated by the wide discrepancies in these rankings for the following nine States.

| State | Rank in reimbursement | Rank in maximum legal charge |
|--------------------|-----------------------|------------------------------|
| Missouri..... | 12 | 1 |
| Michigan..... | 26 | 2 |
| New York..... | 19 | 3 |
| New Jersey..... | 37 | 4 |
| Massachusetts..... | 21 | 5 |
| Vermont..... | 29 | 10 |
| New Hampshire..... | 25 | 12 |
| Alabama..... | 31 | 19 |
| Tennessee..... | 38 | 20 |

The average maximum legal charge for 44 States for which reimbursement data are cited in table 2 was \$73 per month, but these States collected an average of only \$6.22 per resident per month from liable relatives or the patients themselves. Nine States (Colorado, Indiana, Maine, New Mexico, North Carolina, Oklahoma, Rhode Island, Virginia, and Wisconsin) which had low maximum charges, \$31 to \$65 per month or an average of \$55, had a monthly per resident reimbursement average of \$8.60. In contrast, 20 other States with maximums from \$75 to \$180 (mean charge \$115) collected only a per resident average of \$7.20.

Cost of reimbursement programs. Available data on costs for administration of reimbursement programs are limited. Analysis of these costs in fiscal 1961 yielded some noteworthy differences in four States in each of which the maximum legal charge for the institutionalized mentally retarded does not differ from its maximum charge for patients in its State hospitals for the mentally ill. In Connecticut, which had an average daily resident patient population of 11,799 for the mentally retarded and the mentally ill combined, administration of its reimbursement program cost approximately 5 percent of the total amount collected, or \$17.13 per year for each mentally retarded and mentally ill resident patient. Massachusetts, with a combined total of 29,153 resident patients, spent \$5.77 per patient per year, or 2.6 percent of all collections, to administer its reimbursement program. In Illinois reimbursement for a combined average resident patient population of 45,778 cost 6 to 7 percent of all money collected, an annual cost per resident patient of \$12.37. New York, with its combined average daily resident patient population of 113,680, spent 3 to 4 percent of collections to administer its reimbursement program, or \$8.80 per resident patient (4). The reimbursement performances just cited were accomplished by these four States with maximum legal monthly charges ranging from \$81 to \$165.

Collection and use of money. In 23 States the institution collects charges; in 20 States, the department; and in 4, the county. In 15 States the collections go into the general funds of the States; in 19, to the institution; in 3 no payment is required; and for 10 States this information

was not available. In New Jersey the county tries to collect as much as it can of the one-half of the average per capita cost per resident which it is required to pay to the State; any collections over this 50 percent are transmitted to the State.

In Ohio the first \$23.83 per month paid for each resident goes into the general revenue fund, and any amount collected in behalf of a patient which is in excess of this goes into a rotary fund which is later transferred to the general fund to support the Ohio Bureau of Research and Training; however, once these funds are transferred to the general fund, they are no longer earmarked as specific revenue. In Illinois all collections for the care of the mentally retarded and the mentally ill go into its unique Mental Health Fund from which appropriations are made for various purposes.

Unpaid charges. In 21 States unpaid charges accumulate as a debt against the patient or his estate. In 18 States unpaid charges can accumulate as a debt against the estates of liable relatives. In 10 States even the difference between the adjusted monthly charge and the maximum legal charge accrues as a debt against the estate of the patient. In Maryland this applies only for the 3 years preceding the death of the patient.

Collection by lien or claims. Thirty-four States obtain liens or file claims against the estates of patients for unpaid charges, and 22 States do so against the estates of liable relatives. In 1957 all liens and claims against liable relatives of the mentally retarded in South Dakota were discharged and declared unenforceable.

Statute of limitations. In 22 States there is an applicable statute of limitations on unpaid charges for the care of the mentally retarded after 3 to 20 years. In 17 States the statute of limitations does not apply, in the 3 States which do not require payment this is of no concern, and for 8 States this information was not available.

Funds allocated for research or training. In most States the funds appropriated for research or training of personnel, or both, involve mental retardation as well as mental illness, although the emphasis and proportionate distribution of funds depends on the State. In fiscal 1961 a

total of \$33,336,089 was appropriated by 33 States for research or training of personnel, or both, and the distribution on a per patient basis in the individual States has been tabulated elsewhere (2). For these 33 States the yearly per patient expenditures for research and training varied from a high of \$160.96 in Michigan to a low of \$1.42 in Virginia. The mean value was \$38.25, and the median was \$23.11 per resident patient per year. Five States accounted for 75.6 percent of the funds appropriated by all States for research or training of personnel, or both, in the areas of mental illness and mental retardation. Ten States appropriated no special funds for research or training of personnel, and this information was not available for the remaining seven States.

Patient-to-personnel ratios. This ratio of the number of residents per full-time employee in the State institutions for the mentally retarded from 1952 to 1962 is given in table 1. In fiscal 1962 there were 63,452 full-time personnel caring for 173,758 average daily resident patients in the 123 public institutions in 48 States, excluding Alaska and Nevada. The number of residents per full-time employee in the individual States in 1962 is shown in table 4. The most favorable ratio was 1.4 in Kansas and the least favorable, 5.3, was in Mississippi; the median for all States was 2.7.

The ratios of residents per physician, registered professional nurse, social worker, principal and teacher, and psychologist and psychometrist are available for the individual States for fiscal 1960 (table 4). These ratios for all States combined in fiscal 1960 were as follows: 294 residents for each physician, 101 for each registered professional nurse, 365 per social worker, 105 per principal and teacher, and 587 residents for each psychologist or psychometrist.

Admissions and Discharges

Total admissions. The sum of the first admissions and readmissions (excluding transfers) represents total admissions which are shown for fiscal years 1952 to 1962 in table 1, expressed as percent of the average daily resident patient population. The total admissions for the individual States in 1962, similarly expressed, are given in table 4. The highest value for total admissions was 24.3 percent in Arizona, and the

Table 4. State data on admissions, net releases, deaths, and patient-to-personnel ratios, fiscal years 1960 and 1962

| State | Percent total admissions ^{1 2} | Percent net releases alive from institution ^{2 3} | Percent deaths in institution ² | Patient-to-personnel ratio, number of residents per— | | | | | |
|---------------------------|---|--|--|--|------------------------|-------------------------------|------------------|-----------------------|-------------------------------|
| | | | | Full-time employee | Physician ⁴ | Registered professional nurse | Social worker | Principal and teacher | Psychologist and psychiatrist |
| | fiscal 1962 | fiscal 1962 | fiscal 1962 | fiscal 1962 | fiscal 1960 | fiscal 1960 | fiscal 1960 | fiscal 1960 | fiscal 1960 |
| Alabama..... | 10.4 | 3.6 | 1.3 | 4.0 | 838 | 239 | 335 | 129 | 419 |
| Alaska ⁵ | | | | | | | | | |
| Arizona..... | 24.3 | 5.6 | 2.9 | 2.8 | (⁶) | (⁶) | 558 | 37 | 558 |
| Arkansas..... | 8.9 | 7.6 | 0 | 1.7 | (⁶) | 152 | 152 | 19 | 152 |
| California..... | 7.7 | 6.4 | 1.7 | 2.0 | 160 | 46 | 188 | 162 | 311 |
| Colorado..... | 5.9 | 1.7 | 2.1 | 2.4 | (⁶) | 88 | 265 | 64 | 531 |
| Connecticut..... | 9.9 | 8.6 | .8 | 2.5 | 356 | 132 | 445 | 48 | 296 |
| Delaware..... | 7.5 | 4.8 | 1.7 | 2.1 | 138 | 37 | 138 | 43 | 553 |
| Florida..... | 14.6 | 6.0 | 2.5 | 1.5 | 419 | 152 | 419 | 60 | 280 |
| Georgia..... | 12.3 | 5.1 | .7 | 3.2 | 262 | 101 | 656 | 82 | (⁶) |
| Hawaii..... | 4.7 | 3.5 | 1.3 | 2.6 | NA | NA | NA | NA | NA |
| Idaho..... | 3.7 | 4.2 | .9 | 2.4 | 809 | 270 | 270 | 135 | 809 |
| Illinois..... | 5.1 | 1.5 | 2.0 | 4.6 | 337 | 174 | 673 | 561 | 1,010 |
| Indiana..... | 9.7 | 1.9 | 2.7 | 2.6 | 414 | 129 | 187 | 89 | 466 |
| Iowa..... | 6.2 | 13.8 | 2.4 | 2.9 | 386 | 204 | 248 | 96 | 231 |
| Kansas..... | 12.2 | 11.4 | 2.5 | 1.4 | 201 | 39 | 183 | 84 | 168 |
| Kentucky..... | 7.0 | 9.3 | 2.0 | 4.8 | NA | NA | NA | NA | NA |
| Louisiana..... | 10.2 | 4.2 | 2.2 | 2.0 | 299 | 187 | 250 | 250 | 749 |
| Maine..... | 5.9 | 11.8 | 2.1 | 2.3 | 119 | 65 | 178 | 57 | 204 |
| Maryland..... | 10.7 | 3.4 | 2.0 | 2.4 | 150 | 150 | 125 | 83 | 322 |
| Massachusetts..... | 6.4 | 7.4 | 2.3 | 2.7 | 212 | 64 | 635 | 821 | 809 |
| Michigan..... | 5.8 | 1.7 | 1.9 | 2.7 | 388 | 76 | 278 | 119 | 777 |
| Minnesota..... | 8.3 | 3.5 | 1.5 | 3.5 | 470 | 101 | 513 | 196 | 940 |
| Mississippi..... | 5.5 | 2.0 | 2.1 | 5.3 | 1,125 | 375 | 1,125 | 563 | 1,125 |
| Missouri..... | 6.7 | 5.4 | 1.7 | 2.4 | 507 | 230 | 1,267 | 149 | (⁶) |
| Montana..... | .7 | 3.8 | .8 | 5.1 | (⁶) | 164 | (⁶) | 91 | 819 |
| Nebraska..... | 5.1 | 2.1 | 2.2 | 4.1 | 1,071 | 306 | 1,071 | 165 | (⁶) |
| Nevada ⁶ | | | | | | | | | |
| New Hampshire..... | 5.6 | 1.7 | 1.8 | 2.5 | 409 | 102 | 410 | 91 | 819 |
| New Jersey..... | 5.3 | 4.4 | .9 | 3.0 | NA | NA | NA | NA | NA |
| New Mexico..... | 8.0 | 5.7 | 1.8 | 1.9 | 216 | 108 | 216 | 27 | 216 |
| New York..... | 8.5 | 1.0 | 2.2 | 2.9 | 258 | 136 | 451 | 100 | 1,712 |
| North Carolina..... | 17.4 | 12.5 | 1.5 | 2.6 | 1,036 | 122 | 777 | 90 | 811 |
| North Dakota..... | 3.6 | 5.3 | .7 | 3.6 | 315 | 420 | 631 | 126 | 630 |
| Ohio..... | 5.6 | 3.4 | 1.5 | 2.8 | 327 | 201 | 262 | 82 | 604 |
| Oklahoma..... | 9.1 | 2.3 | 1.6 | 3.9 | NA | NA | NA | NA | NA |
| Oregon..... | 9.2 | 6.5 | 1.3 | 3.2 | 238 | 170 | 298 | 132 | 397 |
| Pennsylvania..... | 8.8 | 7.0 | 2.0 | 2.6 | 244 | 73 | 610 | 107 | 514 |
| Rhode Island..... | 9.7 | 7.5 | 1.7 | 2.2 | 301 | 226 | 226 | 53 | 301 |
| South Carolina..... | 4.7 | 3.5 | 1.4 | 4.4 | 630 | 168 | 1,261 | 81 | 1,261 |
| South Dakota..... | 5.8 | 4.7 | 2.5 | 4.4 | 538 | 1,077 | (⁶) | 120 | 539 |
| Tennessee..... | 9.8 | 3.6 | 2.0 | 3.6 | 271 | 339 | 452 | 339 | 452 |
| Texas..... | 15.3 | 5.5 | 2.0 | 2.6 | 373 | 210 | 1,679 | 99 | 560 |
| Utah..... | 8.0 | 9.2 | 2.7 | 3.8 | (⁶) | (⁶) | 963 | 120 | (⁶) |
| Vermont..... | 6.5 | 3.1 | 1.5 | 3.6 | (⁶) | 118 | 296 | 85 | 592 |
| Virginia..... | 10.5 | 6.4 | 2.3 | 3.0 | 286 | 68 | 358 | 84 | 716 |
| Washington..... | 3.4 | 2.1 | 1.2 | 2.7 | 258 | 75 | 278 | 150 | 516 |
| West Virginia..... | 6.0 | 4.6 | 1.4 | 2.2 | 359 | 120 | (⁶) | 120 | (⁶) |
| Wisconsin..... | 6.3 | 3.0 | 2.3 | 2.1 | 320 | 56 | 391 | 93 | 503 |
| Wyoming..... | 6.3 | 4.1 | 3.0 | 2.4 | (⁶) | 183 | 548 | 46 | 548 |

¹ Includes first admissions and readmissions but excludes transfers.

² Expressed as percent of average daily resident patient population.

³ Equals number of residents at beginning of year plus all admissions except transfers minus deaths in institution minus number of residents at end of year.

⁴ Excludes superintendents or assistant superintendents who may be physicians.

⁵ No institutions for the mentally retarded.

⁶ No member of this profession in institutions.

NOTE: NA means information not available.

lowest was 0.7 percent of the average daily resident population in Montana; the median was 7.3 percent.

Age of first admissions and residents. The distribution by age groups of first admissions and resident patients in public institutions for the mentally retarded for 10 fiscal years with a similar breakdown of the population of the United States in 1960 is shown in table 5. An average of 67.3 percent of all first admissions and 23.9 percent of all residents were under 15 years; in the U.S. population 31.0 percent were under 15 years in 1960. Only 4.1 percent of all first admissions and 23.1 percent of all residents were 40 years of age and over, while this age group comprised 35.8 percent of the nation's population in 1960. The average age for all first admissions was 13.8 years, for all residents, 27.7 years; for the total population in the United States it was 31.8 years.

Direct discharges, total discharges, and net live releases. Only those residents who are discharged directly from the institution proper constitute the direct discharges which are deducted when average daily resident patient populations are calculated. These direct discharges, expressed as percent of the average daily resident patient populations for fiscal 1952 to 1960, are given in table 1. Data on direct discharges from the institutions for 1961 and 1962 are not yet available.

Total discharges represent the sum of the direct discharges and those discharged from extramural care. Residents in extramural care are those on the institution's books who are not residents in the institution but are on trial visit, are boarding in family care, are in the State hospitals for the mentally ill or in institutions for the mentally retarded in other States, or are otherwise absent or on unauthorized leave. They are not included in the calculation of the average daily resident patient population. Values for total discharges for the fiscal years 1952 to 1960 are given in table 1. Those for fiscal 1961 and 1962 are not yet available but can be approximated by calculating the net live releases.

Net live releases for a given year represent the direct discharges from the institution plus placements on extramural care minus returns from extramural care. Since data on movement to and from extramural care in the individual States are not usually available until several years after the fiscal year has ended, net live release statistics for the individual States must be approximated from the following calculation: number of residents in the institution at the beginning of the year plus all admissions and readmissions (but excluding transfers) minus the number of deaths in the institution minus the number of residents in the institution at the end of the year (δ). This algebraic sum

Table 5. Analysis by age groups of first admissions and residents in State institutions for the mentally retarded, fiscal years 1951-60

| Age group* (years) | First admissions | | Residents | | Total population in United States in fiscal 1960 (percent) |
|------------------------|------------------|----------------------------|------------------|----------------------------|--|
| | Percent of total | Range of 10 annual figures | Percent of total | Range of 10 annual figures | |
| Under 5..... | 17.1 | 14.4-19.6 | 2.4 | 1.9-3.0 | 11.3 |
| 5-9..... | 25.3 | 23.1-27.5 | 8.3 | 5.8-9.3 | 10.4 |
| 10-14..... | 24.9 | 22.8-26.8 | 13.2 | 11.7-14.5 | 9.3 |
| 15-19..... | 16.8 | 15.8-18.4 | 14.8 | 13.8-15.7 | 7.4 |
| 20-24..... | 4.9 | 3.8-5.8 | 11.4 | 10.8-13.4 | 6.0 |
| 25-29..... | 2.7 | 1.7-3.6 | 9.8 | 8.8-12.0 | 6.1 |
| 30-34..... | 2.2 | 1.4-2.8 | 8.9 | 8.0-10.1 | 6.7 |
| 35-39..... | 1.7 | 1.4-2.4 | 7.8 | 7.4-8.1 | 7.0 |
| 40 and over..... | 4.1 | 3.4-6.6 | 23.1 | 21.3-23.8 | 35.8 |
| Age unknown..... | .3 | .1-1.1 | .3 | <.1-1.2 | ----- |
| Total..... | 100.0 | ----- | 100.0 | ----- | 100.0 |
| Mean age..... | 13.8 years | | 27.7 years | | 31.8 years |
| Number of persons..... | 99,664 | | 947,979 | | 179,323,000 |

divided by the average daily resident patient population yields the percent net live releases for the fiscal year. Frequently the average of the number of residents at the beginning and end of the year is used as the divisor, although this may induce a slight additional error. The net live releases for the individual States, expressed as percent of the average daily resident patient population in fiscal 1962, are listed in

Table 6. Some statistical differences between the mentally retarded and the mentally ill, United States

| Factor and year | Men- tally re- tarded | Men- tally ill |
|--|--------------------------------|----------------------|
| Monthly maintenance cost per resident patient: | | |
| 1959..... | \$125 | \$133 |
| 1960..... | 137 | 141 |
| 1961..... | 143 | 152 |
| 1962..... | 155 | 164 |
| Percent of general revenue expended for maintenance of residents (1961)..... | . 9 | 3. 3 |
| Average maximum legal monthly charge: | | |
| 1959..... | \$70 | \$108 |
| 1960..... | 78 | 113 |
| 1961..... | 89 | 124 |
| 1962..... | 92 | 127 |
| Percent of maintenance cost reimbursed from private sources (1959)..... | 5. 3 | 9. 5 |
| Average reimbursement per resident patient per month (1959)..... | \$6. 22 | \$13 |
| Patient movement: | | |
| Percent total admissions (1962) ¹ | 8. 1 | 52. 8 |
| Percent deaths in institutions and hospitals (1962) ¹ | 1. 9 | 9. 5 |
| Percent net live releases (1962) ¹ | 4. 4 | 44. 3 |
| Percent direct discharges from institutions or hospitals (1960) ¹ | 1. 0 | 19. 7 |
| Percent discharges from books of institutions or hospitals (1960) ¹ | 3. 8 | 35. 8 |
| Percent residents at end of year who are new residents (1960) ² | 6. 1 | 29. 5 |
| Age distribution of residents: | | |
| Mean age in years (1951-60)..... | 27. 7 | 53. 6 |
| Percent under 15 years (1951-60)..... | 23. 9 | . 5 |
| Percent age 40 and over (1951-60)..... | 23. 1 | 77. 9 |
| Age at first admission: | | |
| Mean age in years (1951-60)..... | 13. 8 | 48. 2 |
| Percent under 15 years (1951-60)..... | 67. 3 | 1. 7 |
| Percent age 40 and over (1951-60)..... | 4. 1 | 61. 5 |
| Personnel: Number of resident patients per— | | |
| Full-time employee (1960)..... | 3. 0 | 3. 0 |
| Professional employee (1960)..... | 26 | 21 |
| Physician (1960)..... | 294 | 129 |
| Registered professional nurse (1960)..... | 101 | 58 |
| Social worker (1960)..... | 365 | 249 |

¹ Expressed as percent of average daily resident patient population.

² As percent of residents at end of year.

NOTE: Values are averages for all States with few exceptions.

table 4. They ranged from a high of 18.8 percent in Iowa to a low of 1.0 percent in New York. The median for percent net live releases for all States was 4.5 percent.

Death rates. Deaths in the institutions as percent of average daily resident population for 11 fiscal years are shown in table 1. This value was fairly constant. The percent deaths in the institutions in fiscal 1962 in the individual States are given in table 4. These values varied from 3.0 percent in Wyoming to 0.7 percent in North Dakota and Georgia. The median for deaths in the institutions in 47 States was 1.9 percent of the average daily resident patient population.

New residents. The concept of new residents developed from a study attempting to evaluate the length of stay of institutionalized retardates and the losses of income to the State from cut-off from further payments after different periods of time. The number of new residents remaining at the end of the year who were admitted to the institution during that same year can be obtained from the sum of the number of residents at the end of the year plus the number of direct discharges from the institution, plus the number of deaths in the institution, minus the number of residents at the beginning of the year. The values for new residents expressed as percent of those resident in the institution at the end of the year for each of 9 fiscal years are given in table 1. During this period an overall average of only 5.8 percent of the residents at the end of the year were new residents.

Dissimilarities between mental retardation and mental illness. In addition to the usually stated differences in etiology, prognosis, and treatment of these two conditions, wide disparities may be noted in the statistical findings for maintenance expenditures, charges for care, reimbursement, patient movement, age distribution of residents and of first admissions, and patient-to-employee ratios (table 6).

Summary

The number of State institutions for the mentally retarded increased from 95 in 1952 to 123 in 1962, and the monthly maintenance costs per resident in the same period rose from \$76 to

\$155. Total admissions fluctuated during these 11 fiscal years, but were lowest in fiscal 1962. Percent direct discharges from the institutions proper remained fairly constant, but percent total discharges from the books of the institutions declined slightly. Percent deaths in the institutions ranged from 1.9 to 2.3 percent of the average daily resident patient population. Analysis of all first admissions from fiscal years 1951-60 showed that 17.1 percent were under 5 years and 67.3 percent were under 15 years; the overall mean age at the time of first admission was 13.8 years. During this same period 2.4 percent of all resident patients were under 5 years of age and 23.9 percent were less than 15 years of age; the mean age for all residents was 27.7 years. The patient-to-personnel ratio for all State institutions decreased favorably each year from 1952 to 1962. At the end of fiscal 1962 there were 63,452 full-time personnel caring for 173,758 average daily resident patients in 123 State institutions for the mentally retarded, a ratio of 2.7 residents per full-time employee.

In fiscal 1962 the maintenance expenditures per resident in the individual States varied from \$55 to \$287 per month; the median was \$150. The highest maintenance disbursements per resident were not made by the States with the highest annual general revenues. Maintenance expenditures by States for patients in their institutions for the mentally retarded varied from a high of 2.17 percent to a low of 0.17 percent of their general revenue; the median value was 0.9 percent for all the States. Maximum legal monthly charges to residents and liable relatives for care in State institutions for the mentally retarded in 1962 varied from 0 in 3 States to a high of \$190; the median maximum charge for all States was \$82 for liable relatives and \$99 for the patients themselves. Determinations of ability to pay and the magnitude of the charges assessed against family groups having identical income vary greatly in the 50 States. The statute of limitations applies to charges owed for varying periods of time in at least 22 States. That part of the maintenance cost reimbursed by payments from residents and their liable rela-

tives varied from 0 to 18.2 percent in 1959, and the median for all States was 4.3 percent. In 14 States the county of residence must pay the State sums varying from \$10 per month per resident to the full cost of care in the institutions for the mentally retarded.

Statistical differences between mental retardation and mental illness in the areas of administrative and patient movement data have also been presented. Continuous study and early report of the items discussed in this paper are indicated. Suggested areas of need for detailed exploration are length of stay of residents, estimated period of institutionalization of current admissions, and maximum legal charges and reimbursement.

REFERENCES

- (1) Eagle, E.: Charges for care and maintenance in State institutions for the mentally retarded. *Amer J Ment Defic* 65: 199-207, September 1960.
- (2) Eagle, E.: Charges, costs, and other factors related to maintenance of patients in public mental hospitals. *Public Health Rep* 78: 775-790, September 1963.
- (3) Council of State Governments: State action in mental health, 1958-59. Chicago, April 1960.
- (4) Commonwealth of Massachusetts, Legislative Reference Bureau: Reimbursement for the care of mental patients. Boston, Feb. 19, 1962.
- (5) U.S. Public Health Service, National Institute of Mental Health: Patients in mental institutions, 1952-1960. Part I. Public institutions for mental defectives and epileptics. PHS Publication Nos. 483, 495, 523, 574, 632, 715, 781, 820, and 963. U.S. Government Printing Office, Washington, D.C., 1954-63.
- (6) U.S. Public Health Service, National Institute of Mental Health: Mental Health Statistics, Current Reports: Provisional patient movement and administrative data, public institutions for the mentally retarded, U.S., 1960, 1961, and 1962. Series MHB-I-7. U.S. Government Printing Office, Washington, D.C., April 1963.
- (7) Governor's Conference on Philosophy and Program of the Illinois Patient Pay Plan: Final report and recommendations. Chicago, June 29, 1962.
- (8) U.S. Bureau of the Census: Compendium of State government finances in 1961. Washington, D.C., 1962.
- (9) National Association of Reimbursement Officers: Report of Committee on Reports and Publications. Hartford, Conn., July 6, 1959. Mimeographed.